

### **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of the claims in the application.

#### **Listing of Claims**

1-2. (Canceled)

3. (Original) A composition matrix comprising electroprocessed fibrinogen, wherein the electroprocessed fibrinogen is insoluble in water.

4-7. (Canceled)

8. (Currently Amended) The composition of Claim [[1]] 3, further comprising ~~a substance~~ one or more substances.

9. (Currently Amended) The composition Claim 8, wherein the ~~substance~~ one or more substances is selected from ~~thrombin, the group consisting of~~ aprotinin, Factor XIII, calcium chloride, hydroxyapatite, a fibrinolytic inhibitor, a fibrinolytic agent, fibronectin, ~~or a combination thereof~~ and combinations thereof.

10-14. (Canceled)

15. (New) The composition of claim 8, wherein the one or more substances is selected from the group consisting of cells, molecules, amino acids, peptides, polypeptides, proteins, carbohydrates, lipids, nucleic acids, glycoproteins, lipoproteins, glycolipids, glycosaminoglycans, proteoglycans, growth factors, hormones, neurotransmitters, pheromones, chalcones, prostaglandins, immunoglobulins, monokines, cytokines, humectants, metals, gases, minerals, plasticizers, ions, electrically reactive materials, magnetically reactive materials, light sensitive materials, anti-oxidants, antigens, and combinations thereof.

16. (New) The composition of claim 8, wherein the one or more substances is electroprocessed synthetic polymers.
17. (New) The composition of claim 16, wherein the synthetic materials are selected from the group consisting of poly(urethanes), poly(siloxanes), silicones, polydioxanone, poly(ethylene), poly(vinyl pyrrolidone), poly(2-hydroxy ethyl methacrylate), poly(N-vinyl pyrrolidone), poly(methyl methacrylate), poly(vinyl alcohol), poly(acrylic acid), polyacrylamide, poly(ethylene-co-vinyl acetate), poly(ethylene glycol), poly(methacrylic acid), polylactides (PLA), polyglycolides (PGA), poly(lactide-co-glycolides) (PLGA), nylons, polyamides, polyanhydrides, poly(ethylene-co-vinyl alcohol) (EVOH), polycaprolactone, poly(vinyl acetate) (PVA), polyvinylhydroxide, poly(ethylene oxide) (PEO), and polyorthoesters.
18. (New) The composition of claim 3, wherein the electroprocessed fibrinogen fibers have an average diameter between about 50 nm and about 10  $\mu\text{m}$ .
19. (New) The composition of claim 3, wherein the electroprocessed fibrinogen fibers have a repeated banding pattern of about 20 nm to about 25 nm.
20. (New) The composition of claim 3, wherein the composition comprises a matrix having pores having an average diameter of about 8  $\mu\text{m}$  or less.
21. (New) The composition of claim 3, wherein the composition comprises a matrix having pore sizes between 0.1  $\mu\text{m}^2$  and 100  $\mu\text{m}^2$ .
22. (New) The composition of claim 3, wherein the composition has a density of about 10  $\text{mg}/\text{cm}^3$  to about 100  $\text{mg}/\text{cm}^3$ .
23. (New) The composition of claim 3, wherein the composition has a surface area to volume ratio of between about 4,000  $\text{cm}^2/\text{cm}^3$  and about 400,000  $\text{cm}^2/\text{cm}^3$ .

24. (New) The composition of claim 3, wherein the composition has a surface area to weight ratio of between about 0.5 m<sup>2</sup>/g and about 55 m<sup>2</sup>/g.
25. (New) The composition of claim 3, wherein the composition has a dry elastic modulus of between about 0.5 MPa and about 10 MPa.
26. (New) The composition of claim 3, wherein the composition has a thickness of about 0.05 mm to about 5.0 mm.
27. (New) The composition of claim 3, wherein the electroprocessed fibrinogen is crosslinked.
28. (New) The composition of claim 3, wherein the composition is substantially dry.
29. (New) The composition of claim 8, wherein the one or more substances is surgical glue.
30. (New) The composition of claim 8, wherein the one or more substances is water absorbent polymers.
31. (New) The composition of claim 3, wherein the electroprocessed fibrinogen is electroprocessed from a solvent comprising a halogenated alcohol.